

Crown of the head and a broad crescentic band across the neck black. A pair of red spots separating the collar from the black crown. A black band descends from the eye to the infralabials. Lower parts whitish.

Total length 160 millim. Length of tail 90 millim.

This species would belong to Fischer's genus *Cryptodelma*, which has been separated from *Delma*, on account of the presence of præanal pores. However, a comparison of the allied species will show that this technical character leads to a rather unnatural subdivision of the genus.

XXII.—*Descriptions of new Species of Butterflies from the Pacific Islands.* By H. GROSE SMITH, B.A., F.E.S., F.Z.S.

Papilio oberon.

♂. *Upperside* brownish black; anterior wings crossed obliquely, at about one third from the apex, by a row of white spots arranged as in *P. ageus*, Don., but the spot between the lowest subcostal and upper discoidal nervules is quadrate and not indented externally. Posterior wings with a brownish-white band of spots divided by the veins as in *P. ageus*, but the inner edge of this band slightly invades the cell as in *P. ormenus*, Guér., and the outer ends are rather more indented and approach nearer the outer margins; above the anal angle is a large suboval brick-red spot.

Underside. Anterior wings as on the upperside; the oblique row of spots is broader and irrorated with grey on the inner side. Posterior wings with a row of six brick-red lunules crossing the disk from the submedian nervure to the apex, those nearest the anal angle the smallest, gradually increasing in size, the apical spot being the largest of them; another brick-red spot, larger than the last-named spot, is situate above the anal angle; inside the row of red spots are two rows of greyish markings, the outer of which consists of three narrow bluish-grey hastate lines between the submedian nervules, above which, divided by the veins, is a row of seven bars of grey scales, indented outwardly, those on either side of the uppermost median nervule being the broadest and most indented, the two bars nearest the apex nearly obsolete.

Expanse of wings $4\frac{1}{2}$ inches.

Hab. Santa Cruz (*Woodford*).

Very near *P. ageus*, Don.

Stictoplæa melander.

♂. *Upperside* rich dark brown, with purple reflections over the anterior wings, on which are two small subapical violet spots (the spot nearest the apex the smaller), and four others, very minute, between the veins. Posterior wings with one small submarginal lilac spot below the second subcostal nervule, the space above the upper subcostal nervule to the inner margin pale brown.

Underside. Both wings dark brown, paler towards the outer margins. Anterior wings with the space above the submedian nervure and the costal margin pale brown; a triangular violet spot near the end of the cell and five others beyond the cell; one subapical small spot. Posterior wings with a violet spot near the end of the cell and eight others beyond the cell curving round it, the two nearest the inner margin being linear.

♀. *Upperside* pale brown, darker in the middle, with purple reflections on the anterior wings, on which is a violet spot near the end of the cell, and a little beyond it are five spots, three close together near the costa and the other two between the discoidal nervules; a submarginal row of violet spots, the first, third, and fourth of which are nearly obsolete. On the posterior wings the costal space becomes nearly white towards the apex, the outer fourth becomes very much paler to the margins.

Underside paler than above, becoming nearly white towards the outer margins, with all the spots larger and more distinct except the submarginal spots, which are nearly obsolete; the brands on the upperside of the male are represented by two long whitish streaks.

Expanse of wings, ♂ $2\frac{1}{2}$, ♀ $2\frac{1}{3}$ inches.

Hab. Santa Cruz (*Woodford*).

Nearest to *S. melolo*, Doherty; the wings are comparatively shorter and rounder in the male, and the submarginal row of spots on the anterior wings are much smaller and less distinct, while the female is quite different.

Asthipa Meeki.

♂. *Upperside* scarcely differs from *A. melusine*, Grose Smith, but the subapical vitreous streaks on the anterior wings are more elongate than in that species.

On the *underside* the wings are browner and on the posterior wings the pale bands do not approach so closely to the base; the pale streaks below the subcostal nervules are also

more elongate; the submarginal row of spots of *A. melusine* are only represented by four spots near the apex.

It is a larger insect than *A. melusine*, but very close to it.

Expanse of wings $2\frac{3}{4}$ inches.

Hab. Fergusson Island (*Meek*).

Cupha fumosa.

♂. *Upperside*: both wings fuliginous dark brown, the cells and basal two thirds of the wings paler fuliginous brown; the anterior wings are crossed from the middle median nervule to the inner margin at one third from the outer margin by three ill-defined bright brown spots placed under each other between the veins. Posterior wings crossed beyond the cell by a similar row of spots, outside which is a row of very indistinct dark brown spots.

Underside with the basal three fourths paler fuliginous brown, without any transverse lines or markings; the outer fourth is darker purplish brown, the inner side of the outer fourth is crossed from near the costal to near the inner margin by a row of orange-brown spots, centred with black and nearly surrounded by pale violaceous brown; a pale submarginal dark line crowned by pale violaceous-brown lunules.

Expanse of wings 2 inches.

Hab. Kiriwini, Trobriands (*Meek*).

Doleschallia Comrii, Godm. & Salv.

♂. *Upperside*: both wings resemble *D. dascylus*, Godm. & Salv., in colour, but the basal third of each wing is darker chocolate-brown. Anterior wings with a row of spots across the disk arranged as in *D. dascylus*; the spots are eight in number, the two nearest the costal margin white and small; the next four spots are pale blue centred with white, the fourth spot being larger than the third; the fifth spot is very large and elongated on the outer and inner sides, the latter extending as far as the cell; the fifth spot is abbreviated inwardly, but is wider than the fourth; the seventh and eighth spots are much smaller and are situate further from the margin.

Underside scarcely distinguishable from *D. dascylus*.

Expanse of wings $3\frac{1}{4}$ inches.

Hab. Fergusson Island (*Meek*).

The presence of both sexes of this species in the same collection enables me to describe the male of *D. Comrii*, hitherto, I believe, undescribed. The female specimens in Mr. Meek's collection agree almost exactly with the figure

of *D. Comrui* ♀ in the 'Proceedings of the Zoological Society,' 1878.

My specimen of *D. dascylus* ♀, Golm. & Salv., does not agree with their description of that sex, the band on the anterior wings being browner and entirely divided across the discoidal nervules by an oblique broad black band. If my female specimen is correctly allocated to *D. dascylus*, of which I have little doubt, as it was accompanied by seven or eight males, it is clear that *D. dascylus* (which has been confounded with *D. Comrui*) is a distinct species, the female of which, as in my collection, remains to be described.

Hypolimnas palladius.

♂. *Upperside*: both wings dark velvety brown, anterior wings crossed halfway between the cell and the apex by a broad oblique band of five white spots, divided by the black veins and situate between the subcostal and the lowest median nervules. Posterior wings with an obscure orange-rufous patch near the anal angle, in which is placed a black spot centred with violet; a submarginal row of other black spots is faintly visible, centred with minute violet spots.

Underside. Anterior wings crossed by the white band, wider than on the upperside, and extending between the median nervules nearly to the outer margin; between the lowest median nervule and the submedian nervure is an obscure dark spot, centred with violet. Posterior wings like those of *H. pandarus*, Linn., but the submarginal row of whitish lines is almost obsolete, and the inner edge of the discal tawny band is bordered by an almost white irregular band, widest in the middle, and the middle black spot in the tawny band is small and not centred with white.

♀. *Upperside* paler brown, with the white band on the anterior wings broader than in the male and extending over the subcostal nervules towards the base; a small white spot towards the apex, and a similar spot below the lowest median nervule. Posterior wings with the disk crossed by a broad irregular band of white, narrowing and becoming obsolete towards the costal margin; below this band is a row of black spots centred with white, except the third and fourth spots, the two spots nearest the anal angle partly surrounded by dusky tawny, and the next two bordered outwardly by a whitish space irrorated with black scales; outer margin broadly dark brown, the inner edge of which is sinuate.

Underside paler than above; towards the apex of the anterior wings are three white dots, and the spot above the

submedian nervure is centred with white. On the posterior wings the discal row of spots is smaller than in *H. pandarus*.

Expanse of wings, ♂ $3\frac{3}{8}$, ♀ $3\frac{5}{8}$ inches.

Hab. Fergusson Island (*Meek*).

Nearest to *H. pandarus* and *H. Saundersi*, Wall.

Hypolimnas paleutes.

♂. *Upperside* resembles *H. deois*, Hew., but on the posterior wings the pale discal patch is more widely suffused by violaceous, and the outer edge of the patch is less acutely angulated in the middle; there is only a faint indication of the orange-tawny patch at the anal angle, and there is a distinct submarginal row of spots centred, except the fourth, with violet.

Underside darker than in *H. deois*; the anterior wings are without the pale space in the middle of the costal margin, and, instead of two indistinct pale lines parallel with the outer margin, there is only an indication of one line close to the margin. The posterior wings are dusky brown, except a narrow pale space inside the discal row of spots, which are six in number, centred with violaceous, more conspicuously than in *H. deois*, in which the black spots are centred with white dots; the two spots nearest the anal angle are partly surrounded by dusky tawny; only the spot above the upper median nervule is obsolete, and the row of pale lines near the outer margin of *H. deois* is absent.

♀. *Upperside* dusky brown; a very indistinct, almost invisible, oblique paler band crosses the wings beyond the cell; a white streak at the middle of the costa and a submarginal row of white dots across the disk between the veins, except on either side of the upper median nervule. On the posterior wings is a curved row of black spots across the disk, centred with white, of which the second and sixth are the largest and the fourth the smallest; inside the row of spots between it and the cell is a slight irroration of white scales.

Underside as above, but paler. On the posterior wings the discal row of spots, in which the central spots are much larger, is bordered on either side by a paler dusky space, and the dark outer marginal band is divided by a pale brown sinuate line, divided by the dark veins.

Expanse of wings, ♂ $3\frac{1}{4}$, ♀ $3\frac{3}{4}$ inches.

Hab. Kiriwini, Trobriands (*Meek*).

Parthenos thesaurinus.

♂. *Upperside* bright brown, less olivaceous than *P. thesaurus*, Mathew. Anterior wings: the apical portion nearly black, the brown streaks and markings becoming nearly obsolete; the submarginal brown bands are much narrower and the discal transverse band of spots is much whiter than in that species. On the posterior wings the three basal dark bands are narrower, the space between them being wider and the lunules in the submarginal band more conical in shape.

Underside browner than in *P. thesaurus*, especially on the posterior wings, in which the oblique band of obscure dusky bars which crosses the disk is brown instead of black, as in *M. thesaurus*, and the pale spaces on either side of the row of dark streaks below the band are less bluish grey and more tinged with brown.

Expanse of wings $2\frac{7}{8}$ inches.

Hab. Santa Cruz (*Woodford*).

This butterfly is considerably smaller than *P. thesaurus*, being nearly the same size as *P. aspila*, Honr.

Tenaris melanops.

♀. *Upperside* white; anterior wings with the lower third from the lowest median nervule, and thence across the cell to the costal margin, and the costal margin broadly to the apex fuliginous grey; the veins, except where crossed by the grey colour, are white. Posterior wings with the costal margin to the apex broadly grey, thence along the outer margin more narrowly grey, until that colour merges in the white lower part of the wings; on the disk, between the median nervules and a little on either side, is a very large diffused fuliginous greyish-black spot, in which, a little above its centre, is situate a large cluster of lavender-coloured scales; at the lower end of this cluster is a pure white spot, and near the outer edge of the black spot is another small lavender spot; near the apex is another small lavender spot surrounded by black. Towards the base the wings are clothed with long yellowish-brown hairs.

Underside. Anterior wings as on the upperside; posterior wings with two large fuliginous brown ocelli, one of which is situate on the margin near the apex and the other on the disk extending over the submedian nervules; both ocelli are centred by a white spot partially surrounded by a cluster of lavender-coloured scales, situate in a circular black zone; outside the zone is an indistinct fuscous ring, outside which,

still in the fuliginous brown area, is a minute white spot on each ocellus.

Expanse of wings 4 inches.

Hab. Sud Est, New Guinea (*Woodford*).

Nearest to *T. affinis*, Kirby.

Elymnias melanthes.

♂. *Upperside* dark fuliginous brown, slightly paler towards the apex of the anterior and the basal third of the posterior wings; on the anterior wings is a curved streak of fuliginous dark blue, slightly metallic, commencing on the costa a little above the end of the cell, but not extending to the apex or outer margin, and gradually fading towards the outer angle. The posterior wings are tinged with the same colour in the apical region, and there are two black spots centred with the same colour on the disk towards the anal angle; one of these spots is situate between the two lowest submedian nervules and is larger than the other spot, which is situate on the other side of that vein.

Underside dusky brown; anterior wings rather densely irrorated with pale scales beyond the cell and in the apical area, the posterior wings being also sparsely dusted with similar scales. Posterior wings with a large, irregular, oblong ovate, fulvous patch extending from a little beyond the middle submedian nervule to near the anal angle; in the patch are situate two large black spots, centred with blue spots, which are double in the lower spot; the fulvous patch is more oblique than in *M. agondas*, Boisid., and other allied species. Abdomen fulvous.

♀. Both wings white; anterior wings with costal margin broadly dusky brown, becoming broader at the apex, thence narrowing along the outer margin, and ceasing below the upper median nervule; inside the dusky brown apical area is a faint indication in certain lights of the blue metallic coloration of the male. Posterior wings with the costal and apical margins broadly dusky brown, which extends partly round the outer margin and becomes dusted with white scales towards the anal angle; there are two large diffused dusky spots towards the anal angle, much larger than in the male and centred with large blue spots, those in the lower spot being double; on the disk towards the apex is an indistinct streak of slightly metallic blue, corresponding with the like coloration of the male.

Underside white, with similar dusky brown marginal bands and veins of that colour; on the posterior wings the dusky

brown spots are represented by a large oblong ovate fulvous patch, in which are situate two black spots centred with blue as in the male.

Expanse of wings $3\frac{3}{8}$ inches.

Hab. Woodlark Island (*Meek*).

Nearest to *E. agondas*, *Boisd.*, and *E. glaucopsis*, *Stgr.*

Lampides epilectus.

♂. *Upperside* resembles *L. eclectus*, *Grose Smith*, but on the anterior wings the apex is more broadly greyish black, and on the posterior wings the blue area is more restricted.

Underside: scarcely differs from *L. eclectus*, but on both wings the outer marginal dark area is narrower, the central white area being correspondingly broader.

♀. *Upperside*: anterior wings differ from that sex of *L. eclectus* in having the basal blue area more vivid and extended, and the outer marginal dark area is narrower than in *L. eclectus*, and more broadly margined interiorly with blue.

Underside. The outer marginal dark area of the anterior wings is much narrower; on the posterior wings the inner row of obscure black markings which crosses the disk is situate further apart from the outer row and from the metallic blue lunules which crown the latter.

Expanse of wings $1\frac{3}{8}$ inch.

Hab. Fergusson Island (*Meek*).

Holochila lamia.

♂. *Upperside* resembles *H. absimilis*, *Feld.*, but slightly more violaceous; the cilia of the posterior wings are crossed with black at the ends of the veins.

Underside greyish silvery white, with the base of the wings pale greenish blue, which on the posterior wings extends over the basal fourth. Anterior wings with a grey line at the end of the cell and three dark grey lines across the disk, the outermost being on the margin and the two inner ones being sinuate, with the spaces between rather paler than the rest of the wings; in the interspaces between the veins near the outer margin is a row of hastate dark grey markings. The posterior wings are likewise crossed by three dark grey lines, with the interspaces paler than the basal portion of the wings; the outer line on the margin very narrow, the middle line very deeply indented inwardly, and the third line very sinuate; between the two outer lines is a row of spots resembling an inverted **T**; there is a fourth irregular line

crossing the wings a little beyond the cell and curving round it; two spots and a streak in the cell; one spot above and three spots below the cell nearer the base.

Expanse of wings $1\frac{1}{4}$ inch.

Hab. Fergusson Island (*Meek*).

Nearest to *H. absimilis*; on the underside it is quite distinct from that species.

XXIII.—On *Lepidoptera Heterocera* from China, Japan, and Corea. By JOHN HENRY LEECH, B.A., F.L.S., F.Z.S., &c.*

[Plates VI. & VII.]

THE following paper deals with species of *Heterocera* belonging to the families *Epicopiidæ*, *Uraniidæ*, *Epiplemidæ*, and *Geometridæ*. As, however, there are about nine hundred species in the latter family recorded from the region under consideration, it seemed advisable to divide the paper into two parts. In the present instalment, therefore, only the *Boarmiinae* subfamily of *Geometridæ* is referred to.

The arrangement of the list is based on the system of classification adopted by Sir George Hampson, Bart., in his work on Indian *Heterocera* ('Fauna of British India,' Moths, iii.), but in some instances Mr. Meyrick's revision of the *Geometrina* of the European fauna (*Trans. Ent. Soc. Lond.* 1892, pp. 53-140) has been followed.

Over one hundred and fifty of the species here enumerated have not, so far as I am aware, been previously described.

Family *Epicopiidæ*.

Genus *EPICOPIA*.

(*Westw. Arc. Ent.* i. p. 17 (1845).)

Epicopia mencia.

Epicopeia mencia, Moore, *Proc. Zool. Soc. Lond.* 1874, p. 578, pl. lxxvii. fig. 8.

I received specimens from Chang-yang, Kiukiang, Omci-shan, and Moupin, taken in June and July.

Hab. Central, Eastern, and Western China.

* [We are indebted to the Author for the two Plates and also for contributing largely towards the cost of the extra sheets of letterpress.]